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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,927	05/09/2001	Michael E. Sitzmann	82,141	7227

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Office of Counsel, Code OC4
Naval Surface Warfare Center
Indian Head Division
101 Strauss Avenue, Bldg. D-326
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EXAMINER

MILLER, EDWARD A

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,927

Applicant(s)

SITZAMANN ET AL. *L*

Examiner

Edward A. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-12 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) 9, 25 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-8, 10-12, 21-24, 26-28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-8, 11-12, 21-23, and 26-28 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over each of Kim et al., Barnes et al., Adolph et al. '397, Hostettler, Genz et al., and Okita et al.

Many prepolymers such as claimed, as best understood, are notoriously well known in the prior art and shown for example in Kim et al., Barnes et al., Adolph et al. '397, Hostettler and Okita et al. Each of these references teach polyformals, and there is no claim language as best understood to preclude any of the substituents in these references. In Hostettler, note col. 3, lines 10-16, where oxy-ethylene polymers may contain minor amounts of oxy-methylene groups. In Okita et al., note col. 2, lines 11-16 and 40-44, and col. 7, lines 59-65. In Genz et al., note col. 5, lines 35-37. Further, to the extent that the claimed formal moieties are taught or in the chemical structures as shown, properties such as being degradable, and particularly claimed in claim 22, must be inherent. Further, even if prepared by another method, it is the composition which is claimed here, and the same thing made by a different method does not become patentable. Where the product appears to be the same or only slightly different, the properties recited would appear to be inherent, regardless of the

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method of preparation. The Office does not have testing facilities to determine such. The burden falls on applicant to show that the prior art products do not necessarily or inherently possess the claimed properties. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966; *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596; *In re Best*, 562 F.2d 1252, 1255; 195 USPQ 430, 433-434; *In re Brown*, 459 F.2d 531, 173 USPQ 685.

To the extent necessary, variation of well known parameters such as the molecular weight would have been obvious to one of ordinary skill in the art. It is well settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

4. Claims 3-8, 10-12, 21-24, 26-28 and 30 are rejected under 35 U.S.C. 103(a) as unpatentable over Emmerling et al., in view of Hostetter et al., Okita et al. and Genz et al.

Emmerling et al. teaches the basic invention of polyols, which may be prepared from many precursors. Included in these is hydroxy-terminated polyesters, including from polycaprolactone, col. 2, lines 66-67. Further, in col. 3, lines 1-20, especially lines 5-8, and also lower down in lines 39-42, the use of polyols for reaction may include polyacetals from formaldehyde, e.g. Reaction of such with caprolactone to form the expected polyol as taught would have been obvious. Hostetter et al., Okita et al. and Genz et al., as set forth in the above paragraph, further teach polyols containing formal groups that may be reacted with caprolactone to produce a hydroxy terminated polyester polyol. In Hostetter et al., col. 3, lines 10-16, it is particularly noted that oxy-ethylene polymers may contain minor amounts of oxy-methylene groups. Thus, it is deemed obvious to prepare the desired polyols with interior formal groups as claimed, as best as the claims are understood. Variation of specific moieties and amounts including molecular weights would have been obvious to one of

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ordinary skill. It is well settled that optimizing a result effective variable is well within the expected ability of a person or ordinary skill in the subject art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

5. Claims 3-8, 10-12, 21-24, 26-28 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "degradable" [sic] in claim 21, e.g., is a relative term which renders the claim indefinite. This term is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Throughout, the chemical terminology is improper and does not provide a reasonable definition of what the claimed invention is. A polyol does not "comprise" features, as used in the claims. It cannot be reasonably be determined what is mean by, for example in claim 26, line 2, where the polycaprolactone comprises a molecular weight of about 500. This could mean that the polycaprolactone "comprises" anything with a chemical structure which has a molecular weight of 500, or perhaps it requires a polymer of polycaprolactone alone with such a molecular weight. This is completely incorrect, as a "polycaprolactone" (sic) is not a polyol, and thus the claim is misdescriptive and inconsistent. It appears that the language used throughout is inconsistent with good chemical patent practice, not to mention with chemistry. Perhaps "comprising" considered in the abstract, is intended to not really mean a molecular weight of 500. If it did, the proper term would be that the molecular weight is 500. Since "comprising" is used to form a broad definition, maybe this only requires something near 500, or maybe anything that is liquid as prepared. The point is that the language used fails to define the metes and bounds of the claims as written. The

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claims are replete with errors of this kind, of which the above are merely exemplary, and the claims should all be totally rewritten to clarify or properly define applicants' intended invention. Additional examples, are that the definition of "R" in claim 21 is wrong. "R" is not a chain. Chains are something one puts on car wheels when there is snow on the ground. What is meant by a carbon chain? The actual meaning of such in the real chemical world might be, for example, a carbon fiber where the carbons are all linked to other carbon atoms, and they extend in a linear manner. Or maybe form the starting material for some kind of high tech snow chains. As only carbon is recited, it is not clear what else might be intended. Additionally, the chains might be carbon/heteroatom chains. The most likely heteroatom, considering the actual invention, is oxygen. Without more, the only combinations of oxygen and carbon that come to mind for an ordinary chemist are carbon monoxide and carbon dioxide, gases, neither of which are chains. Such usage of language is so completely chemically incorrect and lacking definition, clarity, metes and bounds or any other thing, that the claims are totally defective. In the real patent and chemical world, "R" is often used a term for a radical of some kind in an organic structure, but whatever "R" really is intended to be, this is incomplete at best and completely lacking at worst. As set forth above, the claims should be completely rewritten to be in accord with proper chemical and patent terminology.

To reprise language from the parent application of this case, chemical technology in the claims has been improperly written in a mechanical way. A polymer does not comprise linkages or chains. Certainly these hypothetical chemical terms are not defined in any reasonable way, and the polymeric moieties are not set forth in any reasonable or definite way. A polymer is not a mechanical assemblage of parts which may be assembled and disassembled at will. One might as well state that liquid ethylene glycol and a solid polyethylene glycol were identical, or that a mixed gas of oxygen and hydrogen is the same as the liquid water reaction product thereof, both obviously

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incorrect. The use of apparently trademarked terms as in claims 9 and 10 is improper as it is not clear if the claims are intended to cover only the trademarked material, and because the content of a trademarked material, as private property, may be changed by the owner. Thus the term may differ at a given future time. These remain exemplary of problems found throughout.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached Monday-Thursday, from 10 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198. The Group fax number is (703) 305-7687.

If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em
December 2, 2002



EDWARD A. MILLER
PRIMARY EXAMINER